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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,979	05/31/2002	Pijush K. Dewanjee	PU2093	3811
23454	7590	04/26/2004	EXAMINER	
CALLAWAY GOLF COMPANY 2180 RUTHERFORD ROAD CARLSBAD, CA 92008-7328			BUTTNER, DAVID J	
			ART UNIT	PAPER NUMBER
			1712	
DATE MAILED: 04/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/063,979

Applicant(s)

DEWANJEE, PIJUSH K.

Examiner

David Buttner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

It is noted that the amendment is an improper form. "(currently amended)" rather than "(amended)" should be used. However, the claimed subject matter is not allowable and the examiner will issue an action on the merits. The final set of claims allowed must have proper identifiers or will be returned by the office of publication.

In view of the papers filed 11/26/03, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by adding David Bartels.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of the file jacket and PTO PALM data to reflect the inventorship as corrected.

Claims 3 and 5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"nitrogen-carbon-oxygen" is not an accurate description of an isocyanate group. Isocyanate has double bonds between the nitrogen and carbon, and between the carbon and oxygen. "-NCO" is also a recognized depiction of an isocyanate group.

Secondly, a "polypropylene glycol terminated diisocyanate" would have alcohol terminal groups rather than isocyanate terminal groups. Is "polypropylene glycol terminated by toluene diisocyanate" intended? Is "toluene diisocyanate terminated polypropylene glycol" intended?

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Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Wu '261 Patent.

Wu produces urethane covered golf balls (abstract). The urethane can be cured with polyamines such as methylene bis (diethyl aniline), dialkyldiamino diphenyl methane and mixtures thereof (column 7, lines 32-45). Applicant's preferred dialkyl diamino diphenyl methane – Unilink 4200 (paragraph 31 of spec.) is bis (sec-butyl amino) diphenyl methane (see chemical Abstract registry No. 5285-60-9). This compound is also suggested by Wu (column 7, line 35). It has the same MW as methylene bis (diethyl aniline).

Wu suggests a 2.5-7.5% isocyanate contain in the propolymer (column 6, line 21), ionomer inner cover (column 6, lines 63-64) and PTMEG or polyoxypropylene glycol (col. 20 line 59).

Wu does not specifically give a mixing ratio for his mixture of curatives, but any ratio is prima facie obvious.

Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Cavallaro 2003/0171166 Publication.

Cavallaro teaches urethane covered golf balls (abstract). The urethane can be cured with polyamines such as methylene bis (diethyl aniline), dialkyldiamino biphenyl methane and mixtures thereof (paragraph 62). Applicant's preferred dialkyl diamino biphenyl methane – Unilink 4200 (paragraph 31 of spec.) is bis (sec-butyl amino) biphenyl methane, which is also named by Cavallaro.

Cavallaro suggest ionomer inner cover (paragraph 42) and PTMEG or polyoxypropylene glycol (paragraph 58).

Cavallaro does not specifically give a mixing ratio for his mixture of curing agents, but any ratio is prima facie obvious.

Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Wu '261 or Cavallaro 2003/0171166 optionally in view of Isaac '568 or Peter '313.

Wu and Cavallaro suggest the use of more than one curing agent, but do not give any reasons for doing so.

Peter (col. 10 line 25-32) teaches such combinations allow for a variation in hardness of the final polyurethane. Isaac (col 2 line 23-30) teaches such a combination allows for a partial cure to form half shells (due to the faster curative) and a final cure to bond the half shells together (due to the slower curative).

It would have been obvious to pair a "softer" curing agent with the methylene bis (diethyl) aniline to form a "softer" polyurethane on the Wu or Cavallaro ball.

Alternatively it would have been obvious to pair a "slower" curing agent with the methylene bis (diethyl) aniline to allow for multiple molding steps.

Applicant's arguments filed 2/11/04 have been fully considered but they are not persuasive.

Applicant argues a second curative lowers the melting point of methylene bis (diethyl) aniline which lengthens the reaction time.

This is not convincing. Applicant allows for any second curing agent. Some curing agents have melting points above that of methylene bis (diethyl) aniline. According to applicant's logic, this would shorten (rather than lengthen) the gel time. Methylene bis (2 chloroaniline) is one such example of a curing agent with a higher melting point (see Ashford's Dictionary).

Secondly, the examiner is not convinced an addition of all lower melting point curing agents to the methylene bis (diethyl) aniline would lower the melting point of bis (diethyl) aniline. It would be expected that each curing agent would still exhibit its own melting point. Perhaps if the two curatives were miscible or soluble in one another there may be some change in the melting point. Miscible/soluble pairs of solids are rare.

Finally, Isaac teaches the combination of fast and slow curatives lengthen the gel time relative to the fast curative alone. This is applicant's goal (paragraph 24 of spec). Applicant's lengthened gel time is the expected result of combining slow and fast curative.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is (571) 272-1084. The examiner can normally be reached on Weekdays from 10:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID J. BUTTNER
PRIMARY EXAMINER

D. Buttner/af
April 21, 2004

David Buttner